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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,805	06/28/2001	Brian M. Grunkemeyer	MS174304.1	7100

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EXAMINER
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LEE, ANDREW CHUNG CHEUNG

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/893,805	<b>Applicant(s)</b> GRUNKEMEYER ET AL.	
	<b>Examiner</b> Andrew C. Lee	<b>Art Unit</b> 2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 7-18 and 20-30 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 16 and 30 is/are allowed.
- 6) ☒ Claim(s) 15, 17, 18 and 20-29 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 9, 10, 11, 12, 13, 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15, 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed subject matter "components" which renders the claim (s) indefinite for the claimed subject matter cannot be determined explicitly the exact meaning by one having ordinary skill in the art.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. The claimed invention is directed to non-statutory subject matter.

Regarding claims 15, 17, the claimed invention does not fall within at least one of the four categories of patent eligible subject matter recited in 35 U.S.C. 101. Claims 15, 17 appear to be a computer related claims, and are being incorporated with the system of claim 1 and claim 16, respectively, that result a hybrid claim. In addition, the claims lacking language that are required under 35 U.S.C. 101 to be statutory.

Regarding claim 24, the claim does not appear to produce a useful, concrete and tangible result, because it is not clear whereas the practical application that the claim invention in part.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 15, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Schofield (US 6253252 B1).

Regarding claims 15, 17, Schofield discloses the limitation of a computer-readable medium storing; computer executable components of the system of claimed (recited "computer usable medium having computer readable code means embodied therein" as a computer-readable medium storing; computer executable components of the system; column 17, lines 46 – 47).

Regarding claim 18, Schofield discloses the limitation of a method for converting code for a synchronous method call on a target method to code for an asynchronous method call (recited "original method may be called by the client synchronously" as converting code for a synchronous method call on a target method; Fig. 8, column 12,

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lines 60 – 66), the method comprising: receiving a code for a synchronous method call (recited “object call may be synchronous” as receiving a code for a synchronous method; column 13, lines 1 – 7); passing the code for the synchronous method call through a call conversion process to produce a code for an asynchronous method call (recited “the call is synchronous and the implementation of the object is asynchronous” as passing the code for the synchronous method call through a call conversion process to produce a code for an asynchronous method call; column 13, lines 4 – 5), where the call conversion process comprises: subdividing the code for synchronous method call into constituent parts (recited “original method, asynchronous input/output operation, asynchronous method complete , and call the response function” subdividing the code for synchronous method call into constituent parts; Fig.8, column 13, lines 40 – 55); and creating one or more asynchronous method call code segments corresponding to the constituent parts (Fig. 8, column 13, lines 50 – 55); creating an asynchronous call result object to store results associated with the asynchronous method call (recited “asynchronous implementation with memory allocation” as creating an asynchronous call result object to store results associated with the asynchronous method call; Fig. 10, column 15, lines 10 – 24); and creating an asynchronous call state object to store state information associated with the asynchronous method call (column 15, lines 25 – 62).

Regarding claim 20, Schofield discloses the limitation of the method of claimed where the constituent parts comprise at least one of a begin operation that will not block due to asynchronous method calling; and an end operation that will not block due to asynchronous method calling (recited “if an application invokes an asynchronous object

call, the application does not wait for the request to complete before it continued with other work” implies a begin operation that will not block due to asynchronous method calling; 12 – 16).

Regarding claim 21, Schofield discloses the limitation of the method of claimed where the end operation is invoked by one of processing associated with polling a field in the asynchronous call state object (recited “asynchronous method completes” as the end operation; Fig. 8, column 13, lines 49 – 55); processing associated with waiting on the asynchronous call result object (column 13, lines 49 – 55); the begin operation (recited “initialization routine”, column 13, lines 56 – 67); and an asynchronous callback routine (column 11, lines 47 – 64).

Regarding claims 22, 23, Schofield discloses the limitation of the method of claimed where code for synchronous method calls associated with at least one of file input/output; stream input/output, socket input/output, networking (recited “the client and server systems are connected by network connections” as networking; column 4, lines 65 – 66), remoting channels, proxies, web forms, web services and messaging message queues can be converted.

Regarding claim 24, Schofield discloses the limitation of a computer readable medium storing computer executable instructions for a method for converting code for a synchronous method call on a target method to code for an asynchronous method call (recited “original method may be called by the client synchronously” as converting code for a synchronous method call on a target method; Fig. 8, column 12, lines 60 – 66), the method comprising: dividing the synchronous method call into at least one of a

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non-blocking asynchronous begin operation and a non-blocking asynchronous end operation (recited “original method, asynchronous input/output operation , asynchronous method complete” as dividing the synchronous method call into at least one of a non-blocking asynchronous begin operation; Fig. 8, column 13, lines 40 – 55); and associating a call state object to at least one of the non-blocking asynchronous begin operation and the non-blocking asynchronous end operation (column 13, lines 29 – 55).

Regarding claim 25, Schofield discloses the limitation of a method for facilitating asynchronous method calls on a target method (recited “original method may be called by the client synchronously” as method for facilitating asynchronous method calls on a target method; Fig. 8, column 12, lines 60 – 66), the method comprising: receiving a request from a calling client to perform processing associated with beginning an asynchronous call to a target method (recited “original method may be called by the client synchronously or asynchronously. If the call is synchronous and the implementation of the object is asynchronous” as receiving a request from a calling client to perform processing associated with beginning an asynchronous call to a target method; column 13, lines 1 – 7); initializing a state tracking object; initializing a result object; queuing a call to the target method, where the call is queued in a thread pool; returning control and a result object to the calling client (Fig. 8, column 13, lines 14 – 39); receiving a request from the calling client to perform processing associated with ending the asynchronous call to the target method; and returning control and a result consistent with the result of the target method to the calling client upon completion of the processing associated with ending the

asynchronous call to the target method (Fig. 8, elements 801, 803, 805, 807, 809, 811, 813, 815, column 13, lines 29 – 67).

Regarding claim 26, Schofield discloses the limitation of the method of claimed where the request from the calling client to perform processing associated with ending the asynchronous call to the target method is controlled by one of polling process and a waiting process (column 13, lines 49 – 55).

Regarding claim 27, Schofield discloses the limitation of a computer readable medium storing computer executable instructions operable to perform a method for facilitating asynchronous method calls to a target method (recited “computer usable medium having computer readable code means embodied therein” as a computer-readable medium storing; computer executable components of the system; column 17, lines 46 – 47, column 13, lines 4 – 5), the method comprising: accepting one or more requests from a caller to begin an asynchronous call to a target method; initializing at least one of a state tracking object and a result object (column 13, lines 9 – 22); queuing a call to the target method (recited “perform an asynchronous input/output operation” as queuing a call to the target method; column 13, lines 42 – 43); accepting one or more requests to end the asynchronous call to the target method; and sending at least one of a result and a result object to the caller (Fig. 8, elements 813, 815, column 14, lines 16 – 29).

Regarding claim 28, Schofield discloses the limitation of a method for facilitating asynchronous method calls to a target method (recited “original method may be called by the client synchronously” as converting code for a synchronous method call on a target method; Fig. 8, column 12, lines 60 – 66), the method comprising: receiving a request



from a calling client to perform processing associated with beginning an asynchronous call to a target method (recited "a client application requests that an operation be performed on an object (the request may be made synchronously or asynchronously)" as receiving a request from a calling client to perform processing associated with beginning an asynchronous call to a target method; column 3, lines 66 – 67, column 4, lines 1 – 4); initializing a state tracking object (column 62, lines 50 – 53; column 63, lines 24 – 32); establishing a callback routine where the callback routine will be invoked upon notification of the completion of the target method, and where the callback routine will invoke processing associated with ending the asynchronous call to the target method (recited "callback function" as a callback routine; column 4, lines 12 – 15); queuing a call to the target method, where the call is queued in a thread pool (column 13, lines 9 – 22); returning control and a result object to the calling client; invoking the callback routine upon receiving notification of the completion of the target method (column 13, lines 49 – 55); performing processing associated with ending the asynchronous call to the target method; and returning control and a result consistent with the result of the target method to the calling client upon completion of the processing associated with asynchronous call of the target method (column 13, lines 56 – 67; column 14, lines 16 – 29).

Regarding claim 29, Schofield discloses the limitation of a system for converting a synchronous method call to an asynchronous method call (recited "original method may be called by the client synchronously, and if the call is synchronous and the implementation of the object is asynchronous" as converting code for a synchronous method call on to an asynchronous method call; Fig. 8, column 12, lines 60 – 66, column

13, lines 1 – 5), the system comprising: means for accepting instructions to call a target method synchronously (recited “the original method may be called by client synchronously” as means for accepting instructions to call a target method synchronously; Fig. 8, column 12, lines 65 - 66); means for generating instructions to call the target method asynchronously (recited “the original method calls an asynchronous method” as means for generating instructions to call the target method asynchronously; Fig. 8, column 13, lines 40 – 55); means for generating an object to store results generated in response to performing the instructions to call the target method asynchronously (column 15, lines 10 – 20); and means for generating an object to store state information associated with performing the instructions to call the target method asynchronously (column 15, lines 37 – 51).

***Allowable Subject Matter***

6. Claims 1, 16, 30 are allowed. Prior art of record, in single or in combination, do not disclose explicitly where the end asynchronous operation method accepts as inputs at least one of: input/output parameters presented to the target method; output parameters presented to the target method; parameters passed by reference to the target method; and the asynchronous call result object, and where the asynchronous call result object comprises: a first field that holds information concerning whether the begin asynchronous operation completed asynchronously; and a second field that holds information concerning whether a server completed processing the target method as disclosed by claims 1, 16; one or more second fields operable to store parameters intended for the target method; a

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third field operable to store information concerning a callback routine to be invoked when the target method completes; and one or more fourth fields operable to store parameters returned from the target method as disclosed by claim 30.

Additionally, all of the further limitations in claims 7, 8, 9, 10, 11, 12, 13, 14 are allowable since the claims are dependent upon the independent claim.

### ***Response to Arguments***

7. Applicant's arguments filed on 7/25/2006 with respect to claims 1, 7 – 18, 20 – 30 have been fully considered but they are not persuasive.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL

Oct 25, 2006



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SUPERVISORY PATENT EXAMINER